

Acute treatment optimization influences disability and quality of life in migraine: Results of the OVERCOME study

Dawn C Buse¹, Amy J. Kovacik (Presenter)², Robert A Nicholson², Erin G Doty², Andre B Araujo^{2*}, Sait Ashina³, Michael L Reed⁴, Robert E Shapiro⁵, Yongin Kim², Richard B Lipton^{1,6}

¹Department of Neurology, Albert Einstein College of Medicine, Bronx, NY, USA; ²Eli Lilly and Company, Indianapolis, IN, USA (*former employee); ³Department of Neurology and Department of Anesthesia, Critical Care and Pain Medicine, and Harvard Medical School, Beth Israel Deaconess Medical Center, Boston, MA, USA; ⁴Vedanta Research, LLC, Chapel Hill, NC, USA; ⁵Department of Neurological Sciences, Larner College of Medicine, The University of Vermont, Burlington, VT, USA; ⁶Montefiore Medical Center, Bronx, NY, USA

BACKGROUND

- Acute treatment for migraine attacks is considered optimized when it resolves pain and restores function^{1,2}
- It is likely that optimized acute treatment for migraine is associated with less disability and better health-related quality of life (HRQoL)

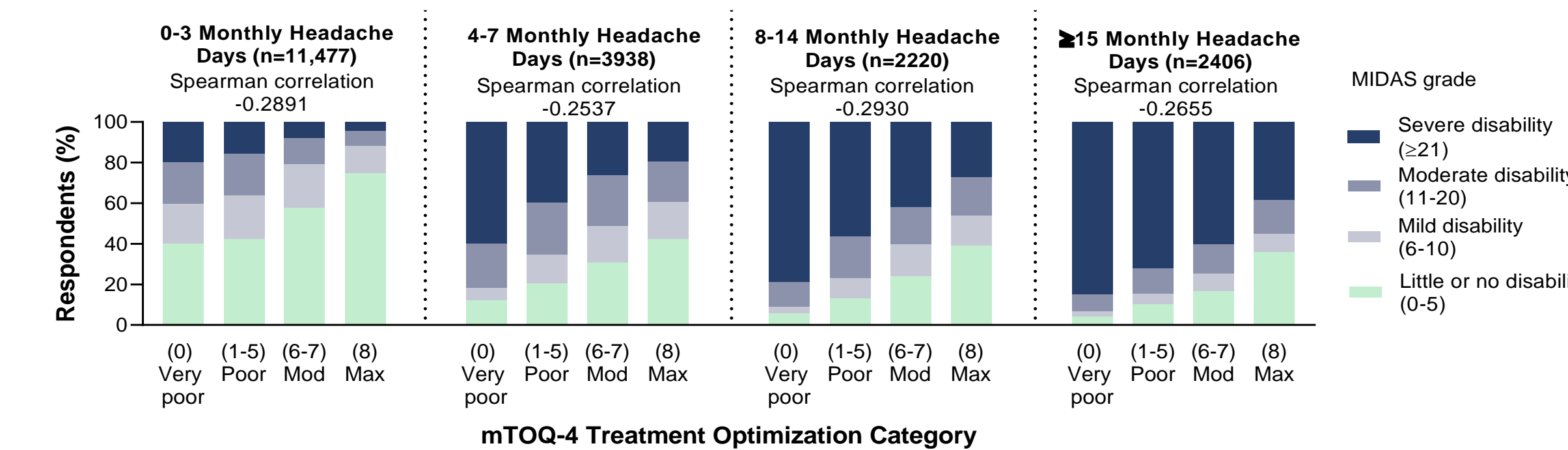
OBJECTIVE

- To assess the influence of acute treatment optimization on migraine-related disability and HRQoL across monthly headache days frequency categories

HRQoL=Health-related quality of life.
1. Serrano D et al. *Headache* 2015;55:502-18; 2. Lipton RB et al. *Cephalalgia* 2009;29:751-9.

KEY RESULTS

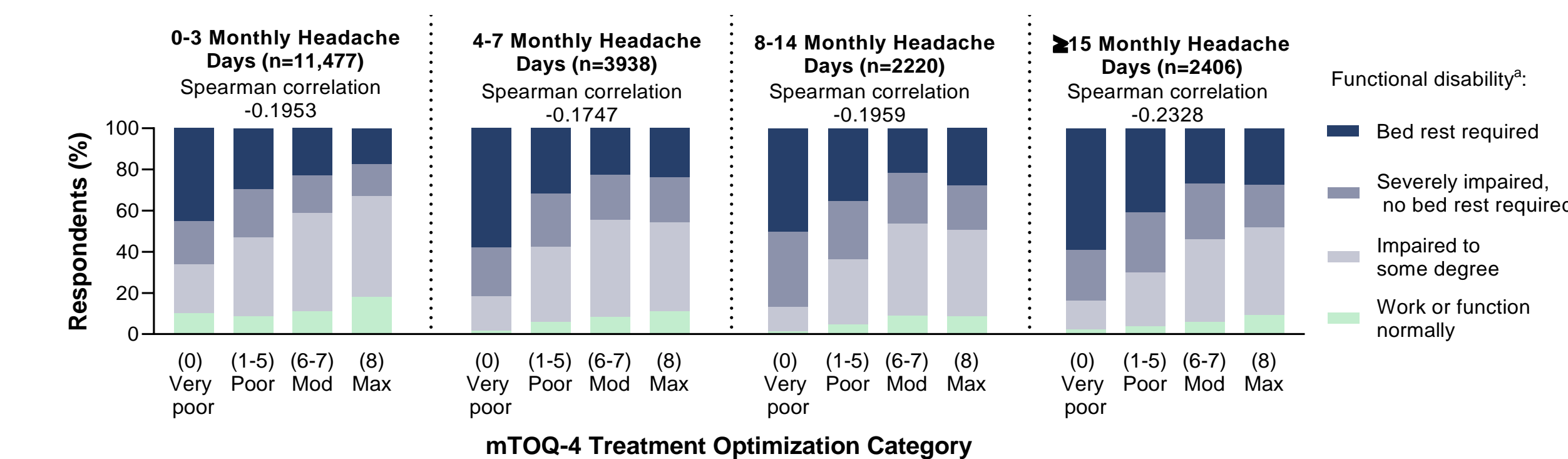
Respondents With Very Poor Acute Treatment Optimization (mTOQ-4) Had Worse MIDAS Scores (p<0.0001)



Max=Maximum; MIDAS=Migraine Disability Assessment; Mod=Moderate; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item).

- Disability increased across monthly headache day categories
- The negative association between treatment optimization and MIDAS grade appeared consistent across monthly headache day categories

Respondents With Very Poor Acute Treatment Optimization (mTOQ-4) Were More Impacted by a Migraine Attack (p<0.001)



*Single-item question "Which best describes how your most severe type of headache usually affects you?"
Max=Maximum; Mod=Moderate; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item).

CONCLUSIONS

- With higher levels of acute treatment optimization, people with migraine generally report lower levels of migraine-associated disability and less impact of a migraine attack
- Within categories defined by monthly headache days, as treatment optimization improves, migraine-related disability, impact, and quality of life also improve
- In this cross sectional analysis, it is not possible to determine directional causality, in other words, if better treatment optimization is a consequence of milder or more responsive migraine
- It is good clinical care to optimize acute treatment, both to relieve individual attacks as well as to possibly reduce aggregate disability and improve HRQoL
- Clinicians may want to consider asking a question (or using a validated measure) regarding acute treatment optimization as part of treatment planning and ongoing management with patients

HRQoL=Health-related quality of life.

Study Design

- Data were obtained from a web-based survey conducted in a representative US sample
 - These data are from Cohort 1 Wave 1 (baseline) survey collected in fall 2018
- Study population (N=21,143)
 - Reported having a headache or migraine attack in past 12 months
 - Categorized with migraine based on:
 - Validated American Migraine Study (AMS)/American Migraine Prevalence and Prevention Study (AMPP) migraine diagnostic screener¹ using modified ICHD-3 criteria² (94% of sample), and/or
 - Self-report of migraine diagnosis by a healthcare provider (61% of sample)
- Subpopulation for this analysis
 - Respondents with data for all analysis measures (n=20,041, 94.8% of sample)
- Measures of interest for the current analysis:
 - Acute treatment optimization (Migraine Treatment Optimization Questionnaire, mTOQ-4)³
 - mTOQ-4 sum score categories: 0=very poor; 1-5=poor; 6-7=moderate; 8=maximum
 - Migraine-related disability (Migraine Disability Assessment scale, MIDAS)⁴
 - MIDAS disability sum score categories: 0-5=little or none; 6-10=mild; 11-20=moderate; ≥21=severe
 - Single item question assessing impact of migraine attack on function
 - 1=Work or function normally; 2=Impaired to some degree; 3=Severely impaired-no bed rest required; 4=Bed rest required
 - HRQoL (Migraine-Specific Quality-of-Life Questionnaire Role Function-Restrictive subscale, MSQ-RFR)⁵
 - Raw domain scores summed and transformed to a 0-100 scale with higher scores indicating better HRQoL
- Statistical analysis:
 - The relationship between mTOQ-4, MIDAS, and MSQ-RFR was examined across categories of 0-3, 4-7, 8-14, and ≥15 monthly headache days
 - One-way analysis of variance or chi-square test, stratified by monthly headache days categorization, evaluated differences between mTOQ-4 groups (p<0.05)

AMPP=American Migraine Prevalence and Prevention Study; AMS=American Migraine Study; ICHD=International Classification of Headache Disorders; HRQoL=Health-related quality of life; MIDAS=Migraine Disability Assessment; MSQ-RFR=Migraine-Specific Quality-of-Life Questionnaire Role Function-Restrictive; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item); OVERCOME=Observational survey of the Epidemiology, Treatment, and Care Of...
1. Lipton RB et al. *Headache* 2001;41:646-57; 2. Headache Classification Committee of the International Headache Society. *Cephalalgia* 2013;33:629-808; 3. Lipton RB et al. *Cephalalgia* 2009;29:751-9; 4. Stewart WF et al. *Neurology* 2001;56(Suppl 1):S20-8; 5. Martin BC et al. *Headache* 2000;40:204-15.

Results

Respondent Characteristics

	N=20,041
Age, years, mean±SD	42.5±14.9
Female, n (%)	15,019 (74.9)
Non-Hispanic white, n (%)	14,457 (72.1)
Monthly headache days, mean±SD	5.8±6.7
Monthly headache days, n (%)	
0-3	11,477 (57.3)
4-7	3938 (19.6)
8-14	2220 (11.1)
≥15	2406 (12.0)

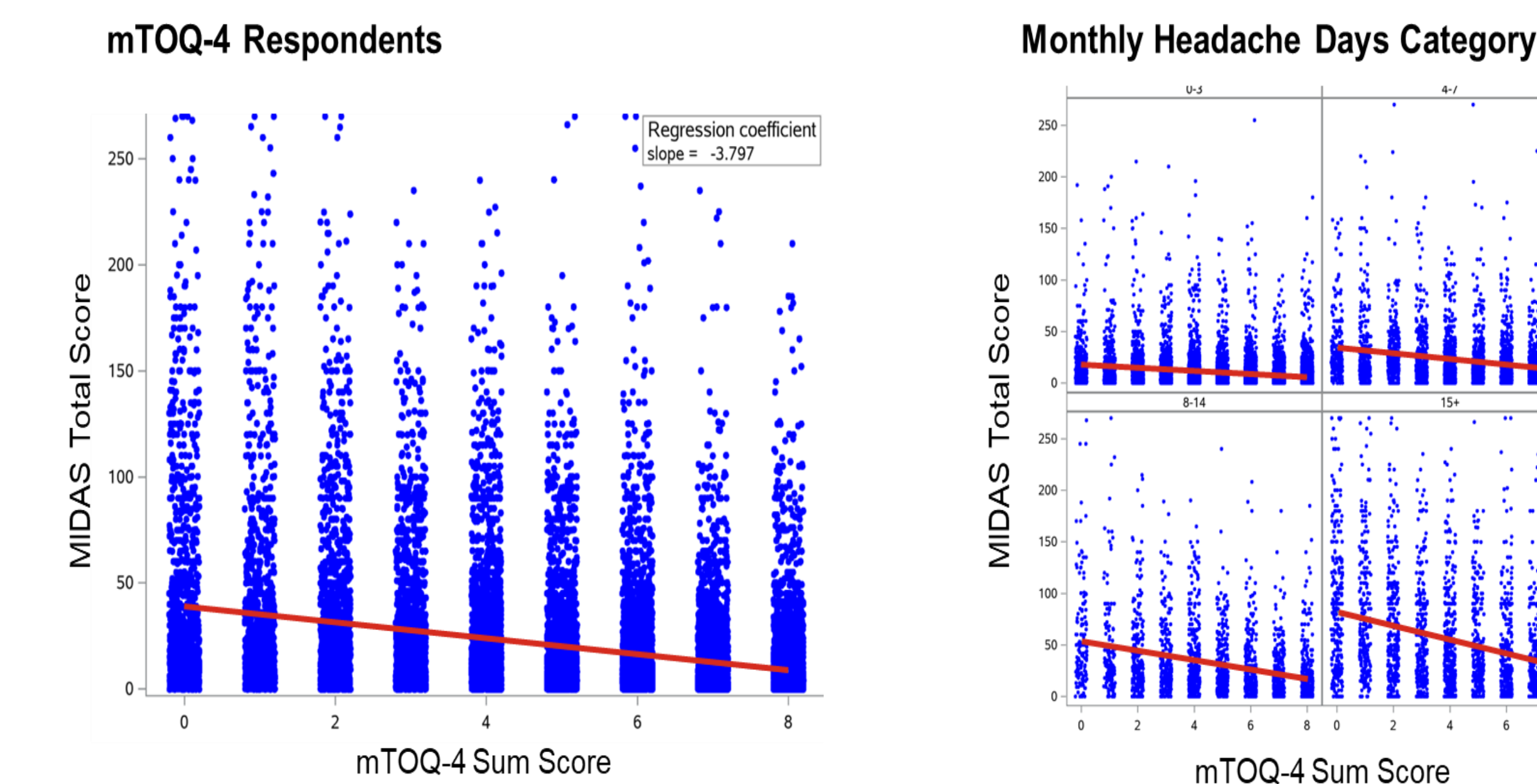
SD=Standard deviation.

Over Half of Respondents Had Poor/Very Poor Acute Treatment Optimization (mTOQ-4) and 43% Had Moderate or Severe Disability (MIDAS)

	N=20,041
mTOQ-4 treatment optimization, n (%)	
Very poor (0)	1100 (5.5)
Poor (1-5)	9139 (45.6)
Moderate (6-7)	5202 (26.0)
Maximum (8)	4600 (23.0)
MIDAS total score, mean±SD	19.6±31.9
MIDAS disability grade, n (%)	
Little or none (0-5)	8192 (40.9)
Mild (6-10)	3204 (16.0)
Moderate (11-20)	3390 (16.9)
Severe (≥21)	5255 (26.2)
MSQ-RFR score, mean±SD	56.0±24.1

MIDAS=Migraine Disability Assessment; MSQ-RFR=Migraine-Specific Quality-of-Life Questionnaire Role Function-Restrictive; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item); SD=Standard deviation.

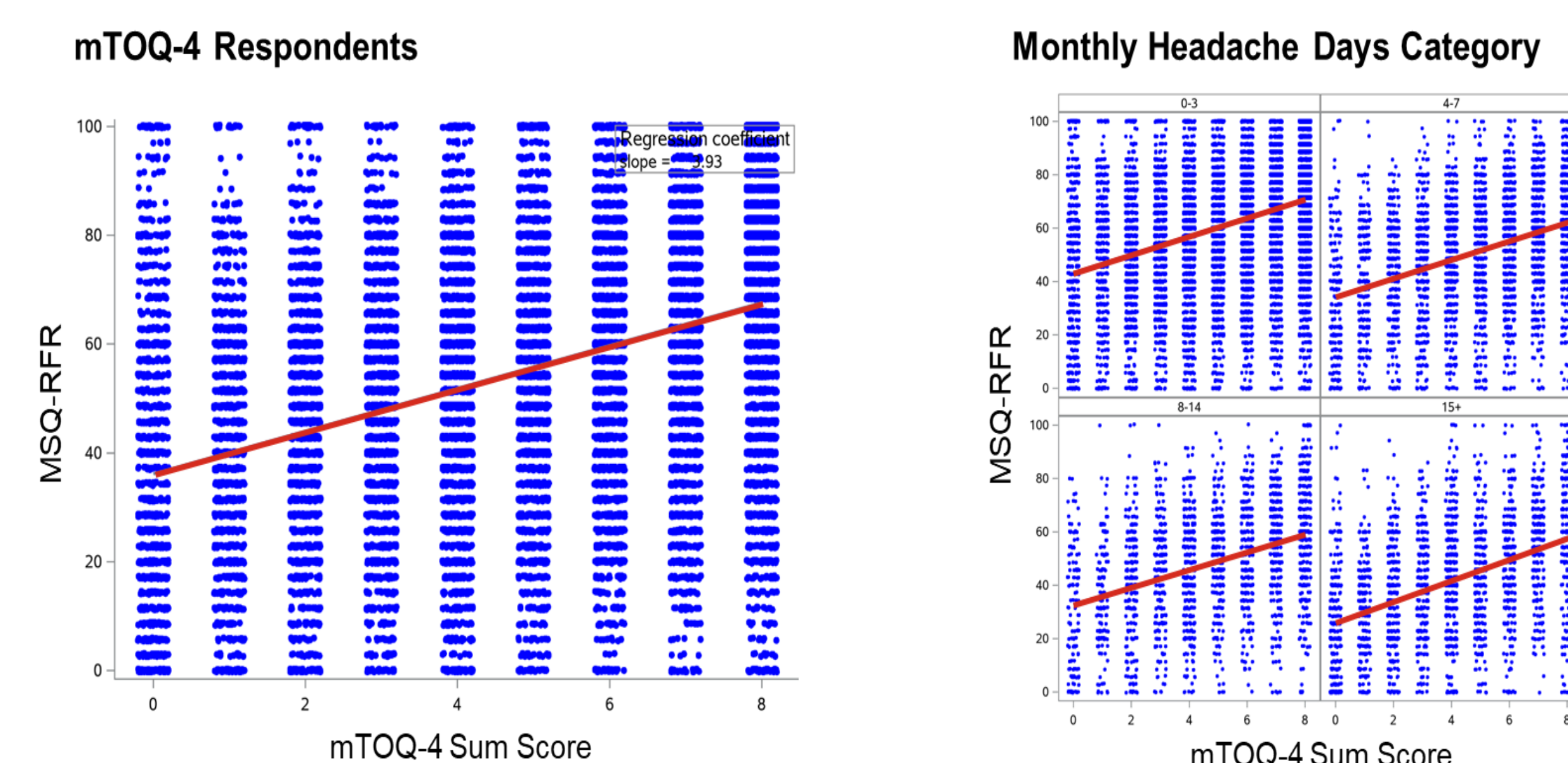
MIDAS Total Score Showed a Negative Association With mTOQ-4 Score (Slope -3.797; p<0.0001)



MIDAS=Migraine Disability Assessment; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item).

- Slope gradient increased across monthly headache day categories, indicating a greater effect of treatment optimization in subjects with more monthly headache days

MSQ-RFR Score Showed a Positive Association With mTOQ-4 Score (Slope 3.93; p<0.0001)



MSQ-RFR=Migraine-Specific Quality-of-Life Questionnaire Role Function-Restrictive; mTOQ-4=Migraine Treatment Optimization Questionnaire (4-item).

Acknowledgment
Medical writing assistance was provided by Linda Donnini, PhD, CMPP, of ProScribe – Envision Pharma Group, and was funded by Eli Lilly and Company.

Disclosures
Dawn C. Buse has received grant support and honoraria from Allergan, Amgen, Avanir, Biohaven, Dr. Reddy's Laboratories/Promius, Eli Lilly and Company, and Teva. Sait Ashina has received consulting fees from Allergan, Amgen, Biohaven, Eli Lilly and Company, Novartis, Percept, Satsuma, Supernus, and Theranica. Michael L. Reed is an employee of Vedanta Research, which has received support from Allergan, Amgen, Dr. Reddy's Laboratories, Eli Lilly and Company, GlaxoSmithKline, Merck, and the National Headache Foundation. Robert E. Shapiro has received consulting fees from Eli Lilly and Company. Richard B. Lipton has received consulting fees, honoraria, and/or research grants from Allergan, American Headache Society, Amgen, Biohaven, Cult Health, Eli Lilly and Company, GlaxoSmithKline, Merck, Partners Healthcare, Pharmar, Piper Jaffray, Promius, Teva, and WebMD, and has stock options in Biohaven. Amy J. Kovacik, Robert A. Nicholson, Erin G. Doty, and Yongin Kim are employees and minor stockholders of Eli Lilly and Company. Andre B. Araujo is a former employee and current minor stockholder of Eli Lilly and Company. Sponsored by Eli Lilly and Company. Previously presented at 72nd American Academy of Neurology (AAN); Virtual 2020; May 18, 2020.



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